F A X TRANSMITTAL

BUREAU OF LAND MANAGEMENT
UTAH

To: Dianne Nelson

From: Deane Zeller

Subject: BSF

Number of Pages: 5

FAX Machine No.: 359-3940

Date: 4-8-91

Time:

USO Log No.:

Comments:

USO Form 1542-3
(August 1989)

IN REPLY REFER TO:

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
SALT LAKE DISTRICT OFFICE
2370 South 2300 West
Salt Lake City, Utah 84119

3500
U-087809 thru
U-087818
(U-027)

CERTIFIED MAIL P760 542 461
RETURN RECEIPT REQUESTED

Mr. Robert Polack
Vice President and General Counsel
Reilly Industries, Inc.
1510 Market Square Center
151 North Delaware Street
Indianapolis, Indiana 46204

Dear Mr. Polack,

As you are aware, the Salt Lake District, Bureau of Land Management, has developed a memorandum of understanding with the USGS-Water Resource Division to study salt loss on the Bonneville Salt Flats. Reilly participated in the development of the salt flats study plan through active membership in the Bonneville Salt Flats Technical Review Committee and BSF Coalition.

In correspondence dated March 14, 1991 Reilly was requested to provide access to data and land as necessary to begin field work on the study (copy attached). The information is critical to the USGS study of the Bonneville Salt Flats and to understanding the impacts of your operation on the hydrologic system.

In as much as Reilly has been unresponsive to the initial request, Reilly is hereby ordered to provide the referenced information within 15 days. Failure to take action in accordance with this order shall subject Reilly to being served with a notice of noncompliance.

If in the judgement of the authorized officer, Reilly has failed to comply with this order within the time allowed, the authorized officer is authorized to order the suspension of operations without prior notice as per 43 CFR 3598.4. This order applies to all lands within the unit agreement.

Sincerely,

Deane H. Zeller

Deane H. Zeller
District Manager

3500
(U-020)

MAR 14 1991

Mr. Robert Polack
Vice President and General Counsel
1510 Market Square Center
151 North Delaware Street
Indianapolis, Indiana 46204

Dear Mr. Polack:

As you requested by telephone from the Bureau of Land Management on March 11, 1991, the activities the U.S. Geological Survey (USGS) plans to conduct over the next 180 days are as follows:

1. Install a stage-recording station on the Federal lease ditch in the vicinity of booster pump #2 (adjacent to I-80) that lifts brine from the Federal lease ditch (east of the Bonneville Salt Flats) into the ditch that transports the brine to the evaporation pond system. This will consist of a stilling well about 18 inches in diameter with a metal box mounted on top to house a water-level recorder.

2. Measure the discharge from booster pump #2 using a flow measuring device during two or more different water levels in the canal.

3. Install a meter on the pump to record the time when the pump is operating.

4. Determine quantity of water withdrawn from wells on west side of Bonneville Salt Flats, about two miles north of I-80. This can be accomplished by (a) installing a stream-gaging station on the canal that transports the water, or (b) measuring the discharge and power consumption of the pumps on the wells and estimating the total quantity of water withdrawn by using yearly power-consumption records.

5. Install a water-level recorder on a shallow, four-inch well adjacent to the Federal-lease ditch, north or I-80.

Also, the USGS's data needs from Reilly Industries over the same 180 day time span are listed below:

1. Climatological data for the last 12 years at stations that Reilly installed near the evaporation ponds.

2. Chemical analyses for water in the Federal-lease ditch and from wells, shallow and deep, for the last 12 years

3. Water-level records for any shallow wells owned by Reilly located north and south of I-80 for the last 12 years.

If you have questions, feel free to call me on (801) 977-4300.

Sincerely,

Deane H. Zeller
District Manager

As Utah's Salt Flats Disappear,

WASHINGTON POST April 7, 1991

By John Lancaster
Washington Post Staff Writer

BONNEVILLE SALT FLATS, Utah—This desolate white plain is surely one of nature's most bizarre geologic inventions.

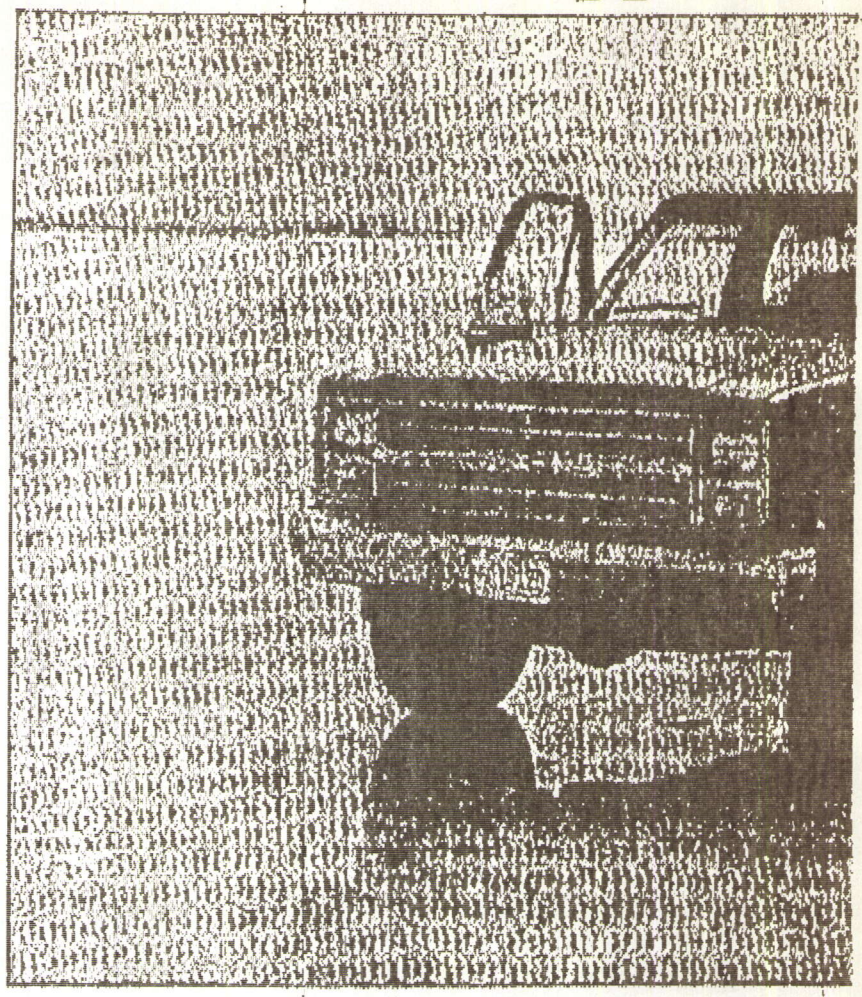
So flat that the curvature of the Earth is visible from ground level, the Salt Flats have long been a magnet for tourists, filmmakers and daredevils who thunder across the salty, asphalt-smooth surface in the world's fastest automobiles.

But the race cars may soon run out of track. Sixteen thousand years after they were born from the remnants of a dried-up ancient lake, the Salt Flats are disappearing.

Since 1926, when surveyors first mapped the area, the flats have shrunk from 96,000 acres to an estimated 25,000 acres today, according to the Interior Department's Bureau of Land Management. Geologists studying the phenomenon say the salt is vanishing at the rate of about 1 percent a year and that the flats could be gone within decades.

The culprit, experts generally agree, is man. Although scientific data on the salt loss are far from complete, federal officials say the problem appears to stem principally from a nearby mine, which pumps salt-laden ground water to produce potash, an ingredient in fertilizers. The water is replaced by rains that percolate through the flats and carry the salt into the ground. Interstate 80, which cuts across the southern edge of the Salt Flats, also may be a factor.

The prospect that this famous geologic anomaly may someday be known as the Bonneville Mud Flats has spawned an unusual alliance among environmentalists, hot rod enthusiasts and state tourism officials, who estimate that racing events here generate $2.9 million a year for the local economy. The Utah congressional delegation is seeking $1.3 million in federal funds to study the problem and identify solutions.



Steve Brooks, a geologist with the Bureau of Land Management, stands on Salt Fla

"It's something that you want to keep because it's unique," said Deane Zeller, chief of the BLM's Salt Lake district, which oversees the area. "There's only three or four others like it in the world."

Geologically speaking, the Salt Flats are a relatively recent phenomenon. Lake Bonneville once covered a third of Utah, as well as parts of Nevada and Idaho, to a depth of nearly 1,000 feet. But the lake slowly dried up, depositing dissolved salt and other minerals in the lowest point of the Great Salt Lake basin—the area now known as the Salt Flats.

To this day, the ancient shoreline can still be seen in the "bathtub ring" that cuts across the face of the nearby Silver Mountains. Streams in the area contain a genetically unique variety of cutthroat trout, direct descendants of those that once swam in Lake Bonneville.

But the salt is going fast. Measurements taken since 1960 show that the crust has thinned from seven feet to five feet at its thickest point and mere inches in some locologists estimate the salt loss at 1.6 million tons per year. "There is no time to waste," Zeller said.

Federal geologists say the problem, in a nutshell, is that man has interfered with the hidden movement of water in the shallow aquifers that underlie the plain. Much of the salt, they say, appears to be dissolving and seeping from the area by way of trenches used in the potash operation. Situated on leased federal land and adjacent private land, the trenches collect the briny ground water, which is then pumped to solar evaporation ponds and separated into its various components.

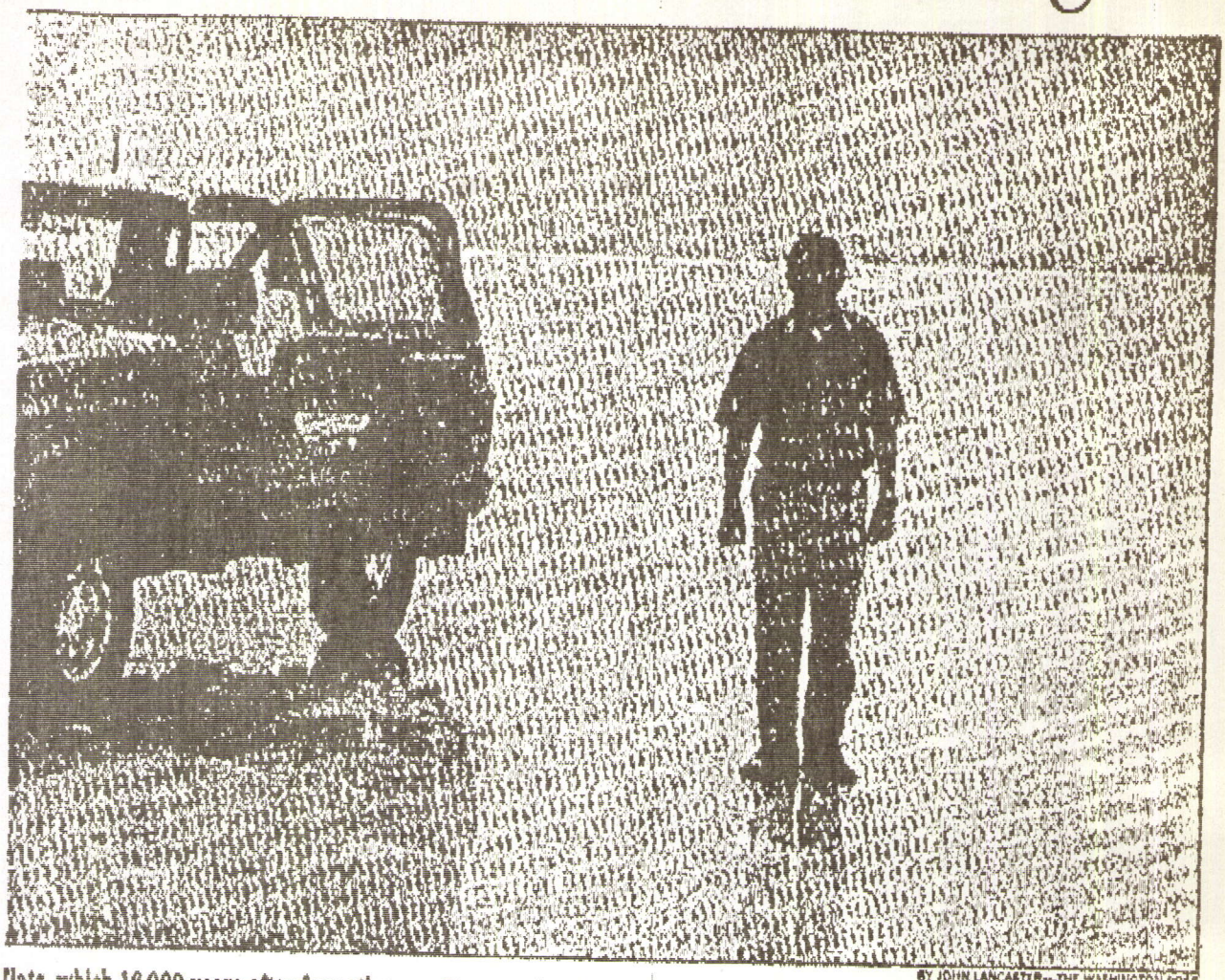
Construction of the Interstate also may have modified the aquifer, creating another "conduit" for salt-laden ground water, according to BLM geologist Steve Brooks. "You've essentially made a drain that didn't exist before," he explained. "The water tables have been lowered in many directions around the Salt Flats."

One of the remedies broached thus far includes mixing water with salt left over from mining opera-

CORRECTION

A date is incorrect in a J Street item in today's Magazine, which was printed in advance. The 6 million tons of newsprint recycled last year represents an 86 percent increase since 1983.

, an Unusual Alliance Emerges



BY JOHN LANCASTER—THE WASHINGTON POST

Flats, which 16,000 years after formation are disappearing at rate of 1 percent a year. A nearby mine draws most of blame.

But Brooks said it is not clear that "there's enough water available to do that." The best solution, he said, would be to move the salt-draining mine from the racing area, possibly by exchanging the mineral leases for comparably salty land at an Air Force bombing range several miles away. But the Air Force has shown little inclination to part with its property.

"It's a very complex situation," Brooks said.

A spokeswoman for Indianapolis-based Reilly Industries, which bought the mine in 1988, noted that potash mining on the Salt Flats dates to World War I and said there is "no clear scientific evidence" that the company is to blame. But she added that the company is "certainly concerned" about the salt loss and has joined a coalition of racing interests and state officials working to solve the problem.

Not that saving the Salt Flats would rate highly on everyone's list of environmental priorities. Devoid of plants, birds and other wildlife, the flats are a haunting, lonely place where distant mountains float like mirage islands above a frozen white sea and summertime temperatures can reach 120 degrees.

Environmentalists value the flats chiefly for their aesthetic qualities. But the loudest cries of alarm have emanated from groups such as the National Hot Rod Association. Every August, hot rod competitors from around the globe descend on the flats for "Speed Week," streaking across the plain at velocities approaching those of jet aircraft. The current land speed record, 622 mph, was set in a jet-powered car here in 1970.

Few places on Earth's surface are so well-suited to the pursuit of speed. Covered in water throughout the winter and spring, the flats by late summer are bone dry, hard as concrete and about as smooth. "It's a natural surface that was basically designed for race cars, you get right down to it," said Rick Vesco of the Utah Salt Flats Racing Association.

But in recent years, cracks, holes and pressure ridges have appeared around the edges of the thinning and weakening flats. On the track, "There are cavities breaking through, which can be unsafe for high-speed cars," said Vesco, who has piloted his twin-engine hot rod to nearly 390 mph on the flats. "Last year, you could stick your arm in to the elbow."

Vesco said the flaws have reached the point where the 11-mile track may have to be shortened this year to eight miles—precious little space for cars that sometimes require five miles to reach top speed and about as long to stop. "You've got to pop the chutes and they sometimes break off," he said. "My car's got three."

The Utah Film Commission also is concerned about the flats, which have served as the backdrop for countless movie scenes, television shows and, recently, Merrill Lynch's trademark bull.

But others suggest the best reason for saving the Salt Flats may have little to do with economics or world speed records. "There's such a strong emphasis on racing," said Brooks, standing in the middle of the Salt Flats as brine lapped at his shoes and the Silver Mountains shimmered in the distance. "[But] I think just as a unique geologic fea-